Forest Service
U.S. DEPARTMENT OF AGRICULTURE

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NATIONAL PRESCRIBED FIRE RESOURCE MOBILIZATION STRATEGY

CHIEF'S FOREWORD

I am pleased to release the agency's National Prescribed Fire Resource Mobilization Strategy. This strategy is one of the commitments I made when I released the "National Prescribed Fire Program Review" in September 2022. It is a continuation of our dedication to improve the prescribed fire program and demonstrates our values of safety and service to protect communities and restore the health and resilience of the Nation's forests.

We are a global leader in the use of prescribed fire as a management tool to reduce wildfire risk to communities, critical infrastructure, and cultural and natural resources. Prescribed fire is also critical to improving forest resiliency and implementing our Wildfire Crisis Strategy. This mobilization strategy includes recommendations to align prescribed fire implementation, support, and coordination agencywide by using fire suppression processes and procedures to supplement and prioritize prescribed fire on landscapes identified under the Wildfire Crisis Strategy. It also outlines a scalable management organization in the form of regional prescribed fire implementation teams sized to match the scope of projects.

As we implement this mobilization strategy, we must continue to engage with the public about why and where we do prescribed burns. We also must continue to coordinate with Tribes, partners, other agencies, and communities in planning and conducting prescribed burns to ensure we incorporate their knowledge, capacity, and support. By working together across landscapes, we can ensure the long-term success of the Wildfire Crisis Strategy.

This mobilization strategy is a fundamental shift in how we do business. It will take time to make these changes. However, we must take some important first steps to implement this mobilization strategy and to ensure the continued success of our prescribed fire program. As such, we will move forward on the following actions:

Chief Randy Moore

• This year and into the future, we will prioritize prescribed fire on a larger geographic scale. Our success will be measured not only in acres, but also in how well we set aside our individual unit goals and commit to stewarding the whole. We need to share qualified personnel who can plan and implement prescribed fire to meet our goal of increasing the pace and scale of prescribed fire. Therefore, I expect all supervisors to allow willing, qualified employees to be available in the Interagency Resource Ordering Capability (IROC) system for prescribed fire assignments. Although this could mean delaying or setting aside other mission-related work, remember that our window for prescribed fire can be limited, especially in the West. In addition, ensuring these employees are available will help to improve work-life balance for all.

• As I stated in the "National Prescribed Fire Program Review," we also will continue to work with Tribes, partners, and communities to expand prescribed burning on National Forest System and other lands.

We still have much to learn from Tribal Nations, and Indigenous traditional ecological knowledge is invaluable as we work to return fire to the landscape. By considering Tribal heritage, supporting cultural burning and fire regimes, and applying Indigenous traditional ecological knowledge, we can achieve our mutual land management goals, support traditions, reduce the risk of extreme wildfires, and uphold our responsibilities to Tribal Nations.

• We have expanded the availability of contracted resources to support priority fuels work. This increased capacity ensures that doing more prescribed burning does not fall squarely on the backs of our existing wildland firefighters. All virtual incident procurement (known as VIPR) resources that were formerly only available for wildfire suppression are now available for prescribed fire. Engines, water tenders, fuel tenders, heavy equipment, logistical support, type 2 crews, and type 2 initial attack crews are accessible when agency resources are unavailable, when standard established processes for prescribed fire resource procurement have been exhausted, or when a special need is unattainable elsewhere. These resources now can be ordered through IROC and filled by the host dispatch center.

• This fiscal year, I have asked the Washington Office Fire and Aviation Management staff to continue to work with the regions to pilot the prescribed fire implementation team (RxIT) concept detailed in this mobilization strategy. These teams are essential for planning and project implementation (preburn planning, execution, and postburn monitoring and reporting). During this time, they will gather data on the pilot projects. In fiscal year 2024, they also will work with regions and partners to develop a feedback loop for refinements and broader application of prescribed fire implementation teams.

• As we increase the scope and scale of hazardous fuels work, as well as work towards meeting our Wildfire Crisis Strategy goals, I cannot overstate the importance of line officers becoming qualified agency administrators as it relates to prescribed fire. Your commitment to meeting these qualifications will have a lasting impact on achieving our agency goals.

I extend my heartfelt thanks to the Prescribed Fire Coordinating and Advisory Team and the National Incident Management Organization Team for their hard work and commitment to completing this mobilization strategy within the timeframe outlined in the "National Prescribed Fire Program Review." I also want to thank all the dedicated employees who supported this work, including agency experts in fire management and operations, contracting, budget, and public affairs. Completing this strategy meant tackling and sorting through multiple complex issues to develop solutions for continuous improvement in how we plan and conduct prescribed burns.

This mobilization strategy is another example of how the Forest Service continues to be a learning organization. It is also an example of how we hold ourselves accountable and follow through on our commitments in service to the American people. They entrust us to manage national forests and grasslands on their behalf. Through this work, we will continue to reduce wildfire risk to people's lives and communities and create resilient forests that will benefit current and future generations.

RANDY MOORE
Chief of the USDA Forest Service

EXECUTIVE SUMMARY

The U.S. Department of Agriculture (USDA), Forest Service has long recognized and studied the value of fire as a tool to manage forest ecosystems (Berg 1989 and Delcourt et al. 1999). Forest ecosystems, including those in the western continental United States, were historically shaped by both naturally occurring fires (e.g., lightning strikes) and the introduction of fire to achieve goals such as land clearing and reduction of fuels to mitigate wildfire threats. These fire-adapted ecosystems depend on fire to maintain functionality and biodiversity, while expanding human habitation has increased the need to suppress fire.

To maintain these ecosystems, the Forest Service and other organizations have developed programs to introduce fire under specific conditions, which is called "prescribed" or "Rx" fire. While the Forest Service is a recognized leader in prescribed fire, the pace and scale of these efforts, especially in the western continental United States, has not kept up with the changing climate, the expanding wildland-urban interface, and the buildup of fuels across landscapes. These circumstances have contributed to an increase in size and destructivity of wildfires, reaching crisis proportions in the West (USDA January 2022).

As part of its Wildfire Crisis Strategy, the Forest Service has identified landscapes in critical need of work to reduce exposure to and risk from wildfires (USDA April 2022). Hazardous fuels reduction is a major component of this work, and prescribed fire is key to reducing fuels. This document, which focuses on managing an increased pace and scale of prescribed fire in the Forest Service, is one component of a suite of efforts addressing the need to protect communities and reduce hazardous fuels in forest ecosystems. Other efforts are underway to increase partner participation, expand the available workforce, accelerate project design and planning, and to integrate mechanical treatments onto the landscape. The Forest Service is also collaborating with Tribes via Tribal Forest Protection Act and Good Neighbor Authority agreements to increase restoration and hazardous fuel reduction work.

The foundation of this strategy is to build upon the existing wildland fire system—including the flexibility, adaptability, and expertise of local resources—and apply those strengths to the planning and execution of prescribed fires. The Forest Service's prescribed fire program must expand to accomplish agency goals detailed in the Wildfire Crisis Strategy. Some recommendations contradict traditional efforts and may be resisted by agency employees; however, they are necessary to meet the needs of a national prescribed fire system.

This strategy recommends building a prescribed fire implementation team (RxIT) for each Forest Service region with landscapes identified in the Wildfire Crisis Strategy or similar areas identified elsewhere. These RxITs would have a seven-person core command and general staff (C&G) operating under the incident command system (ICS). They would be structured like incident management teams (IMTs) used in wildfire response; however, some positions

(e.g., incident commander, operations) would require prescribed fire qualifications. This core group would be supplemented by additional ICS functions to meet prescribed fire needs. The RxITs could be assigned to specific projects or to support landscape-level, cross-boundary fuels management efforts. The RxITs are not intended to replace existing forest or unit implementation teams. They would meet needs such as providing season-long support and surge capacity for large-scale prescribed fire projects. This concept of RxITs is not new; however, it does formalize and build upon existing practices used by national forests. RxITs will increase the pace and scale of implementing prescribed fire projects at landscape levels.

This strategy also recommends expanding the current wildfire coordinating system to include prescribed fire. This would build a multi-mission wildland fire coordinating system. This evolution would not create a new or separate system but allows a prescribed fire coordination system (RxCS) to operate as part of this multi-mission approach to align priorities, consider critical needs, and address resource scarcity for all aspects of wildland fire management. The RxCS, as part of the reconfigured wildland fire coordinating system, would be activated as needed depending on the level of activity and resource competition.

Increasing the pace and scale of prescribed burning will require a different approach to implementation. Forest Service data for 2018–2022 shows an average prescribed fire is just over 100 acres in the western continental United States, while the average for the Nation is just under 300 acres.[1] The traditional style of burning smaller units one at a time needs to be redesigned to include options for managing multiple units together. These smaller units could be packaged together for sequential or simultaneous burning, using an RxIT to provide a centralized command structure across large landscapes with multiple prescribed fire projects. Large projects could be designed and implemented in a model akin to large wildfire engagement, with an RxCS providing prioritization and resource allocation support. The proven and practiced wildfire planning and engagement processes familiar to the agency workforce can be adapted using burn plan intent, limitations, and design to execute landscape-scale prescribed fires.

Each section of this strategy has been considered with the dual purpose of supporting the RxIT style implementation effort while also identifying recommendations and procedures to support all implementation levels in a consistent and scalable fashion. Landscapes identified in the Wildfire Crisis Strategy provide opportunity to inform and improve this strategy as it is implemented. Each burn and location will encounter different conditions and challenges and will provide opportunity for real-time design adjustment.

[1] Forest Activity Tracking System (FACTS) query December 1, 2022, using fiscal year 2018–22 accomplishments.

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Firefighters ignite and monitor a prescribed burn. USDA Forest Service photo by Eric Knapp.

INTRODUCTION

A task group of incident management experts at the Forest Service, an agency of the U.S. Department of Agriculture, developed this mobilization strategy for prescribed fire. The strategy specifically addresses prescribed burning on Wildfire Crisis Strategy landscapes and across regional boundaries.

The requirements for the strategy were to: (1) include a plan for implementation timing, a proposed command structure, and logistics to prioritize and mobilize resources for both suppression and prescribed burning activities; and (2) include necessary staffing, funding, and monitoring to help shape future system improvements.

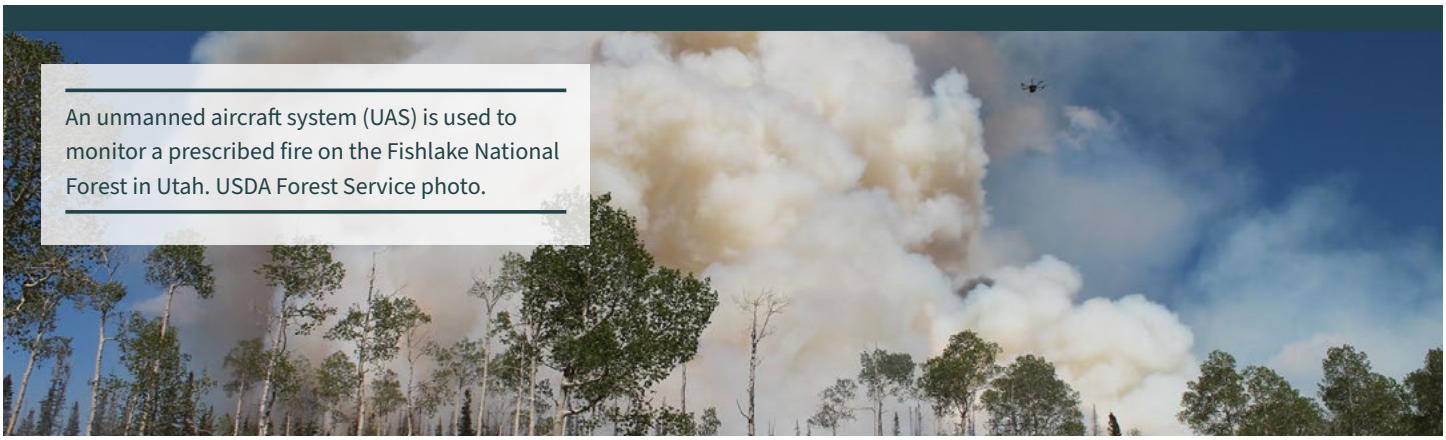
The task group used an internal gap analysis to identify knowns, unknowns, and limitations to success. This process identified several issues that required external and/or higher level input and provided a foundation to produce this strategy.

The "National Prescribed Fire Program Review" (USDA September 2022) includes a recommendation to use "Forest Service suppression resources, qualified militia, and contractors to support implementation of prescribed-burning-related shelf stock within [Wildfire Crisis Strategy] landscapes." This recommendation may lead to an assumption that existing fire management organizations would simply absorb the management of these resources to implement this significantly expanded prescribed fire workload.

While many concepts of wildland and prescribed fire management are similar, the two are not interchangeable. Differences in the level of experience, interest, and expertise in prescribed fire management across regions and landscapes are significant. Many personnel currently qualified at the highest levels in the incident command system (ICS) to manage wildfires are not qualified as high-level prescribed fire burn bosses or prescribed fire managers. Experts in wildfire suppression are faced with the need to quickly expand and diversify their skillsets to manage robust prescribed fire programs. National efficiencies and a consistent, uniform approach to expand capacity while addressing safety and sociopolitical risks are needed to ensure potential conflicts in managing both fire programs are mitigated as the pace and scale of prescribed fire increases. To develop those efficiencies and expand capacity as envisioned, processes are needed to prioritize and coordinate support for multiple prescribed burn programs being implemented both simultaneously and sequentially. These processes would logically be accepted more widely and implemented more quickly to become systemic norms when rooted in familiar practices and concepts that are adapted and expanded to include management of fire suppression and prescribed fire together.

The task group reached out to multiple Geographic Area Coordination Centers (GACCs) and drew from personal experiences in roles such as incident commander, prescribed fire burn boss, and fire management officer to identify current familiar processes that could be adapted and leveraged to develop systemic norms. Ideations were intentionally anchored in what appeared to be most collectively

known, time-tested, and useful to limit required changes and to maximize potential for use in 2023. Using this approach would also ease the transition to management of complex fire suppression and prescribed fire programs simultaneously. The task group's recommendations employ existing processes for resource mobilization and tracking and would use Wildfire Crisis Strategy landscapes as a learning platform. To address prescribed fire management in a more integrated interagency environment, these processes would continue to be refined, expanded, and adapted to accommodate changing needs, conditions, and policies.



An unmanned aircraft system (UAS) is used to monitor a prescribed fire on the Fishlake National Forest in Utah. USDA Forest Service photo.

PRESCRIBED FIRE IMPLEMENTATION

Using prescribed fire implementation teams (RxITs) that incorporate prescribed fire practitioners and expertise into a management structure following ICS concepts would support prescribed fire implementation at multiple organizational and complexity levels. Teams comprised of command and general staff (C&G) positions supported by necessary subordinates at a regional level could be assigned for multiple months to provide public information, planning, finance, and other support both prior to and during the implementation of specific projects. Other teams could be established to implement projects independently and to support implementation of multiple projects using distributed operations concepts. This strategy recommends up to six formal RxITs be formed to support the six Forest Service regions with landscapes identified in the Wildfire Crisis Strategy, with additional RxITs assembled as necessary to support implementation. All RxITs are scalable, can be tailored to meet specific needs, and facilitate the implementation of multiple projects simultaneously or sequentially by leveraging the use of available resources and the planning process to operate efficiently.

Assigned RxITs would ensure the requirements identified in the "National Prescribed Fire Program Review" are met prior to implementation of prescribed fire projects. To establish an effective implementation schedule, these teams would collaborate across multiple levels and would consider a variety of factors that influence probability of success, including weather, resource availability, logistical and other support limitations, and safety considerations.

PRESCRIBED FIRE COORDINATION

The existing wildfire coordination system should be expanded to embed prescribed fire coordinators in established and ad hoc coordinating groups at the national, geographic, subgeographic, zone, and unit levels (fig. 1). Expanding the existing wildfire coordination system to include prescribed fire would support the evolution of a multi-mission wildland fire coordination system and would include a prescribed fire coordination system (RxCS) at all levels. The baseline communication and coordination at local levels between RxITs, agency administrators (AAs), and others would continue; however, the proposed expansion of the existing coordination system to include an RxCS would provide formalized and efficient support at higher activity levels.

Expanding the existing wildfire coordination system to include prescribed fire would support the evolution of a multi-mission wildland fire coordination system and would include a prescribed fire coordination system at all levels.

The RxCS can work across boundaries to ensure that resources are available to support the needs of assigned RxITs implementing multiple projects at multiple levels. The RxCS facilitates the development of a common operating picture that is aligned and maintained as conditions and opportunities change to quickly allocate/reallocate resources and support emerging opportunities in a scalable (single unit, subgeographic, geographic, national) manner.

When resources are assigned to prescribed fire projects, the "closest forces concept," which considers the geographically closest available and qualified resources as the logical option, would be employed. Using this concept would take advantage of local expertise, reduce complexities associated with mobilization and support of nonlocal resources, and allow coordination efforts to address identified gaps in resource availability. The RxCS would be focused on filling those specific gaps, supporting larger and/or more complex projects, coordinating implementation across boundaries, and addressing specialized needs for training, technological support, and agency guidance.

Multi-mission system: Adapting the wildland fire coordinating system to include prescribed fire

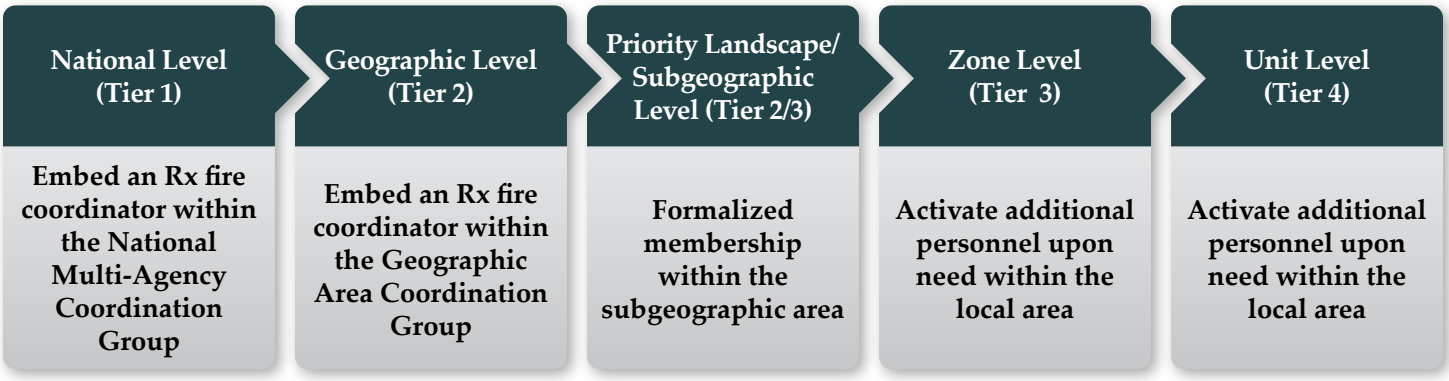


Figure 1.—Adapted wildland fire coordination system.

A prescribed fire on the Osceola National Forest. USDA Forest Service photo by Susan Blake.

PRESCRIBED FIRE ORGANIZATION

Much like wildfire suppression, prescribed fire management ranges in complexity and resource needs vary. The lowest complexity projects may require only a few personnel or other resources to meet all identified needs; however, each requires the commitment of a prescribed fire burn boss (RxBB) and AA, and lower complexity projects generally treat fewer acres than higher complexity projects. By moving beyond this approach to one of packaging multiple units for management as a complex under one RxIT, the pace and scale of implementation can be dramatically increased. Effective communication between AAs, RxITs, wildland fire coordinating groups, and others would determine the appropriate mix of implementation organizations.

The RxIT is part of a larger organization supporting the AA, who may designate a representative to work directly with the prescribed fire organization. The AA (or their representative) would provide direction and delegation as necessary and the RxIT would coordinate and communicate with other groups, including, but not limited to, public affairs, administration, budget, and fire management, to achieve agency objectives. An authorizing document (i.e., delegation of authority (DOA)) should be used to authorize action, define budgetary constraints, identify limits of authority, and to outline procedures, including those related to wildfire declaration.

The RxIT is designed to expand and contract to meet organizational needs. Each function that supports the implementation of prescribed burning can be scaled up or down at any level to ensure that logistical, financial, planning, safety, and public information functions are adequately staffed to support the pace and scale of implementation. The task group identified four tiers of organizational complexity and developed the examples displayed in figures 2–5.

TIER 4: SELF-CONTAINED PLANNING AND IMPLEMENTATION

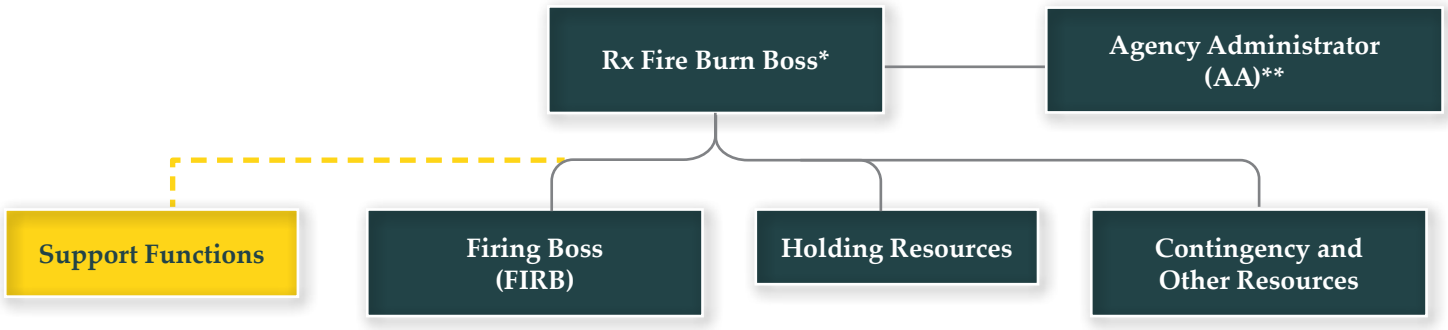


Figure 2.—Tier 4 organization.

** The current "Standards for Prescribed Fire Planning and Implementation" (NWCG 2022) states each prescribed fire will have an appropriately qualified RxBB based on the prescribed fire burn plan complexity analysis.*

*** As of November 2022, agency administrator qualifications for prescribed fire and suppression are distinct and separate. AA qualifications for prescribed fire are now RXA1, RXA2, RXA3. This will require an update to the "Standards for Prescribed Fire Planning and Implementation" (NWCG 2022).*

Features and Considerations—Focus on Implementation

- Command structure consists of an AA and RxBB.
- Coordination needs are minimal and ad hoc, likely taking place at the sublandscape or forest level.
- Resource needs for implementation and support functions (i.e., plans, logistics, finance, public information, and safety) are likely to be filled locally. If gaps are identified, resource orders could be placed to supplement the local organization.

Forest Service and Bureau of Land Management staff participate in an interagency prescribed fire briefing on the Plumas National Forest. USDA Forest Service photo by Jason Miller.

TIER 3 : CENTRAL PLANNING WITH DISTRIBUTED IMPLEMENTATION

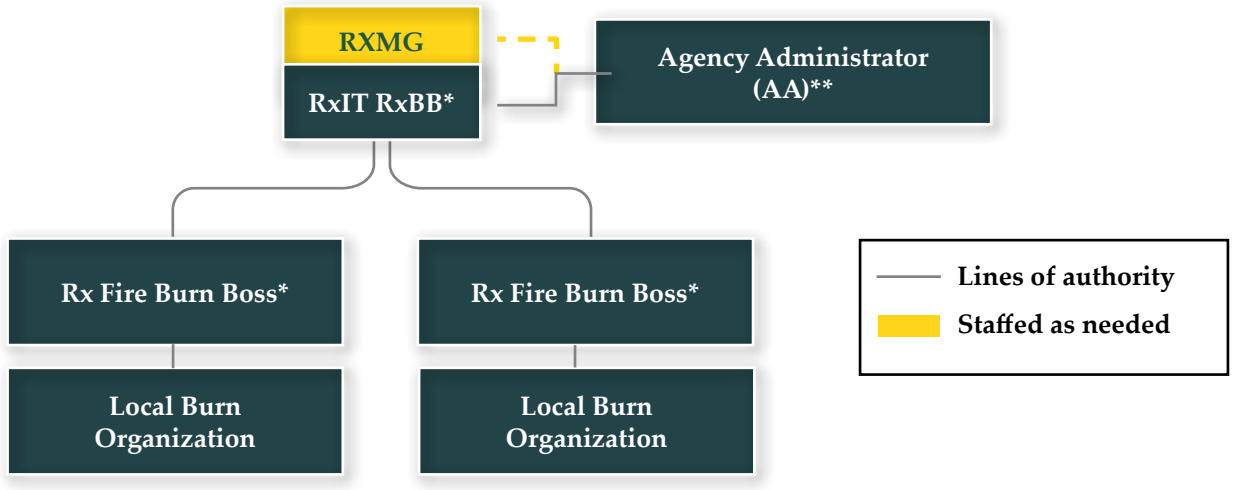


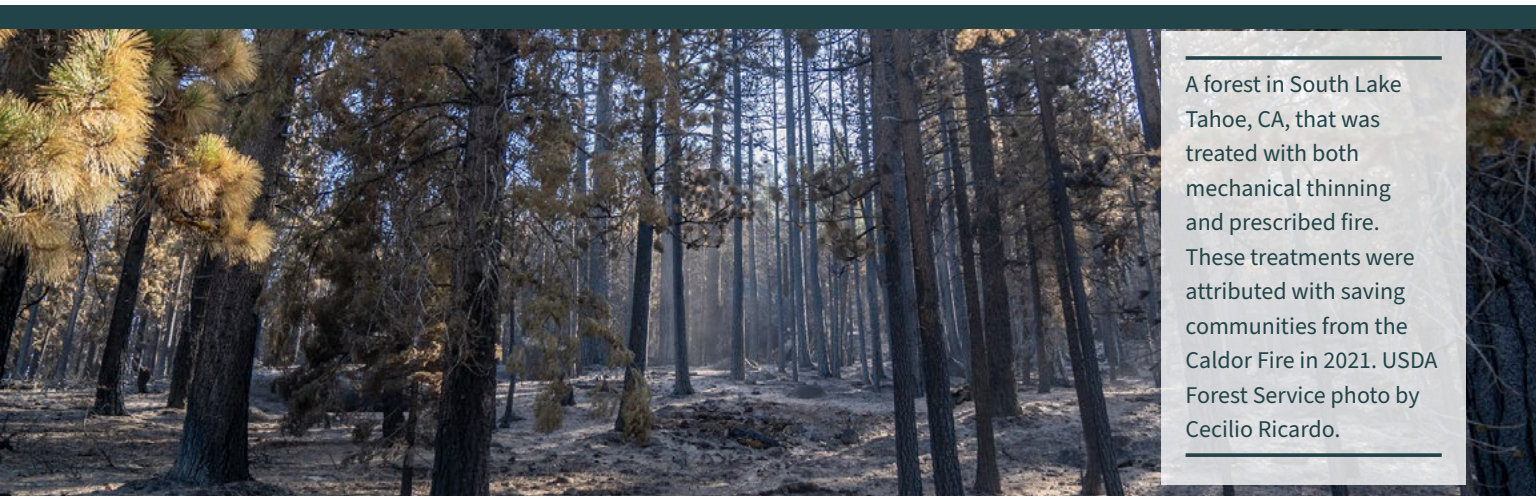
Figure 3.—Tier 3 organization; RxIT = prescribed fire implementation team; RXMG = prescribed fire manager.

** The current "Standards for Prescribed Fire Planning and Implementation" (NWCG 2022) states each prescribed fire will have an appropriately qualified RxBB based on the prescribed fire burn plan complexity analysis.*

*** As of November 2022, agency administrator qualifications for prescribed fire and suppression are distinct and separate. AA qualifications for prescribed fire are now RXA1, RXA2, RXA3. This will require an update to the "Standards for Prescribed Fire Planning and Implementation" (NWCG 2022).*

Features and Considerations—Focus on Implementation

- Command structures may include multiple AAs or AA representatives as burns could be on multiple administrative units. Each burn has an RxBB to manage its burn organization.
- The RxIT is more robust and formalized to provide implementation support functions and oversight of those functions. A prescribed fire manager (RXMG) or RxBB is included in the command structure to function in a role like an incident commander (IC) for a wildfire complex. The RxIT has most C&G positions filled to mitigate span-of-control issues and provide effective coordination and implementation.
- Coordination needs may expand and more resources may be ordered using closest forces concepts.



A forest in South Lake Tahoe, CA, that was treated with both mechanical thinning and prescribed fire. These treatments were attributed with saving communities from the Caldor Fire in 2021. USDA Forest Service photo by Cecilio Ricardo.

TIER 2 : PRIORITY LANDSCAPE OR GEOGRAPHIC AREA COORDINATION

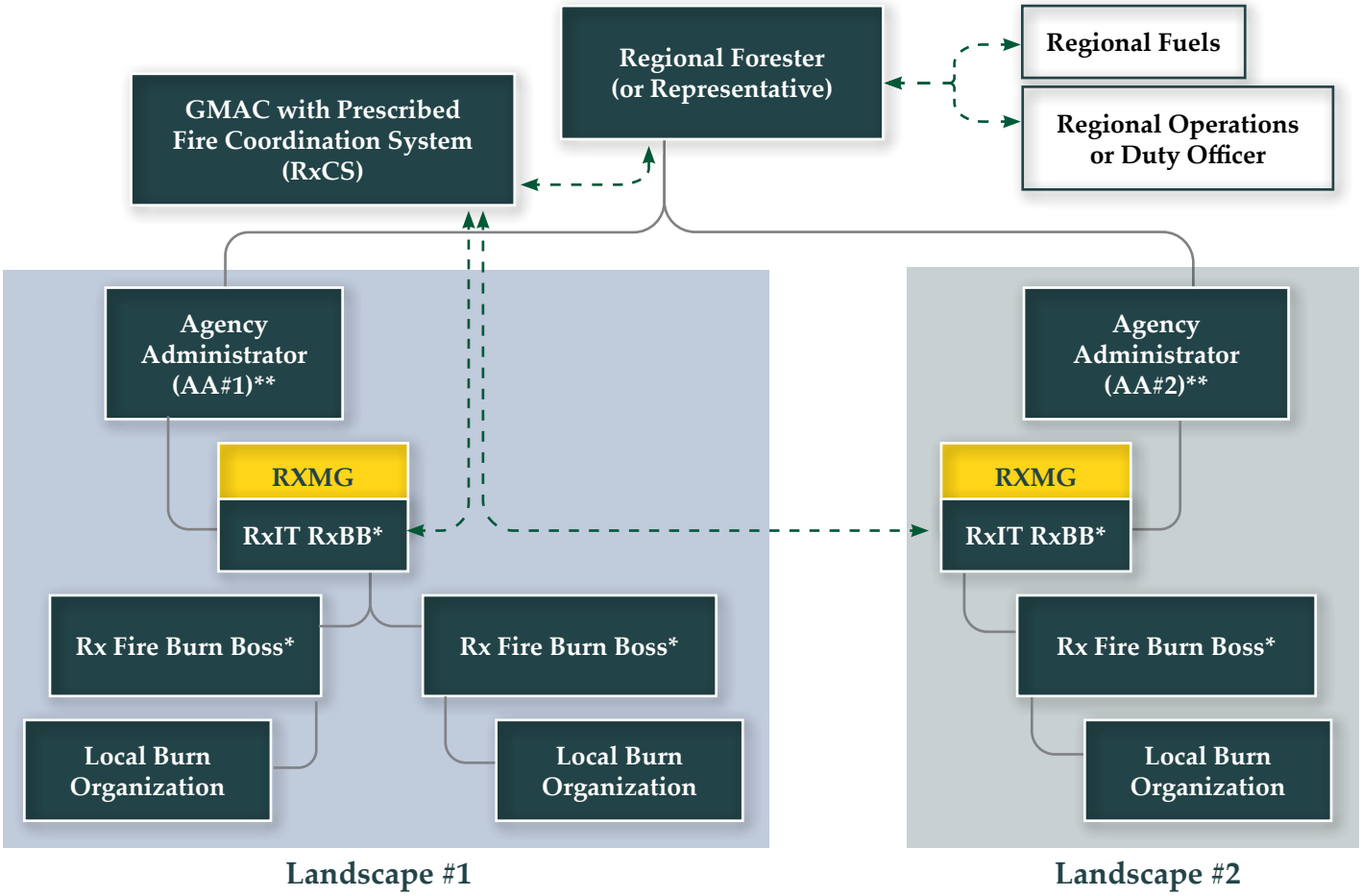


Figure 4.—Tier 2 organization; GMAC = geographic multi-agency coordination; RxIT = prescribed fire implementation team; RXMG = prescribed fire manager.

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*** As of November 2022, agency administrator qualifications for prescribed fire and suppression are distinct and separate. AA qualifications for prescribed fire are now RXA1, RXA2, RXA3. This will require an update to the "Standards for Prescribed Fire Planning and Implementation" (NWCG 2022).*

Features and Considerations—Focus on Coordination

Command structures will include multiple administrative units/AAs. The regional forester(s)/regional forester's representative(s) will be engaged and interacting with Fire and Aviation Management (FAM) leadership.

- The RxIT (with an RXMG/RxBB in the command structure) is formalized to provide implementation and oversight of support functions in one or more landscape or sublandscape levels (refer to tier 3).
- The role of the multi-mission coordination system expands to include RxCS operating within the Geographic Multi-Agency Coordination (GMAC) group.
- Significant mobilization of nonlocal resources is likely.

TIER 1 : NATIONAL LEVEL MULTI-MISSION COORDINATION

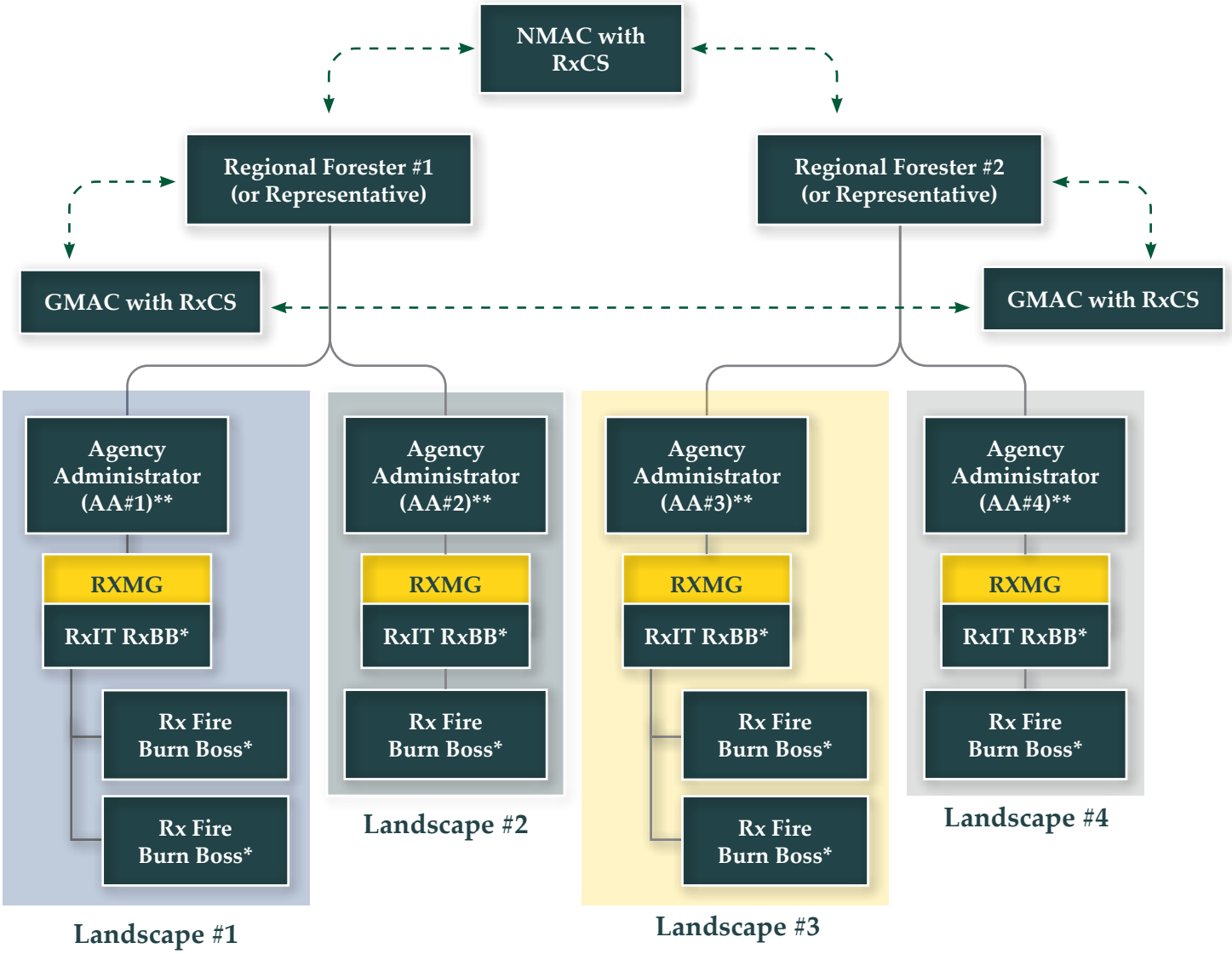

Figure 5.—Tier 1 organization; GMAC = geographic multi-agency coordination; NMAC = National Multi-Agency Coordination; RxCS = prescribed fire coordination system; RxIT = prescribed fire implementation team; RXMG = prescribed fire manager.

** The current "Standards for Prescribed Fire Planning and Implementation" (NWCG May 2022) states each prescribed fire will have an appropriately qualified RxBB based on the prescribed fire burn plan complexity analysis.*

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Features and Considerations—Focus on Coordination

Command structures will include multiple administrative units/AAs. The regional forester(s)/regional forester's representative(s) will be engaged and interacting with FAM leadership.

- RxCS has become national in scope and is operating within the National Multi-Agency Coordinating (NMAC) group in addition to operating within multiple GMACs. Communication and coordination are needed to address and plan for best resource allocation to mitigate potential shortages or conflicts.

PRESCRIBED FIRE IMPLEMENTATION TEAM FUNCTIONAL CONSIDERATIONS

As the need for support beyond formal RxITs is identified, ad hoc complex implementation organizations would be developed. These considerations are intended to provide perspective when filling positions in various functional areas. More detailed information for each of the C&G functions can be found in appendix A.

INCIDENT COMMAND

The incident commander, which in the case of the RxIT is a prescribed fire manager (RXMG) or prescribed fire burn boss (RxBB), is recommended to be filled as described below to best serve acceptable risk and risk ownership at the appropriate level:

- **RXMG:** The incident position description (IPD) aligns perfectly with RxIT oversight (per IPD: An RXMG may be assigned during periods when multiple simultaneous prescribed fires are being conducted; when multiple prescribed fires will be conducted within a short time; or when there are numerous coordination activities with other organizations), although using an RXMG is not required per PMS 484 ("Standards for Prescribed Fire Planning and Implementation," see NWCG 2022). The RXMG is an underutilized role which is limited in qualified personnel (approximately 60 within the Forest Service).[1] The position is intentionally included in the organization examples, as its use would build national capacity, and efforts should be made to increase the number of qualified personnel within the agency.
- **RxBB:** A prescribed fire burn boss with current qualifications at the appropriate complexity level. When assigned to implement a specific burn, the RxBB must be qualified at or above that complexity level. When assigned as an RxIT leader to coordinate implementation of multiple burns at varying complexity levels, qualification at or above the highest complexity level being implemented is recommended (e.g., if a low-complexity project and a moderate-complexity project are being implemented, an RxIT leader at the RXB2 or higher level is recommended; if three moderate-complexity prescribed burns are being conducted, an RXB2 can serve in the role; if a high complexity burn is included, an RXB1 is recommended).
- **Duty officers (DOs):** While commonly used in wildfire preparedness and suppression, DOs often do not carry the same level of prescribed fire expertise, experience, or background and are not recommended to fill this leadership role unless they also carry the RXMG or recommended RxBB qualification.

The RXMG or RxBB is responsible for ensuring the C&G functions are adequately staffed to accomplish the objectives. This could include adding one or more support functions (e.g., planning, public information). The persons performing in those added functions would in turn consider the needs and scale functional staffing appropriately.

[1] Interagency Resource Ordering Capability query, November 2022.

PUBLIC INFORMATION

The local unit public affairs officer is often relied upon to provide support for low-complexity wildfires; however, this approach may not be successful when units begin to significantly expand prescribed burn programs. Social and cultural factors may dictate that even for a low-complexity burn, one or more public information officers (PIOs) are required. These PIOs can be ordered with the specialized communication expertise needed and assigned to address complex issues including smoke sensitivity and lack of familiarity with prescribed burning in affected communities.

Most of the national forests responsible for prescribed fire within the 21 landscapes identified in the Wildfire Crisis Strategy are engaged with 1 or more collaborative organizations. These collaboratives provide a foundation for stakeholder engagement in prescribed fire management. If an implementation schedule were developed, the public information function could be staffed in advance of anticipated burn windows to supplement ongoing outreach and collaboration efforts.

SAFETY

The safety function is likely to be scaled up in response to multiple influencing factors such as air operations, topography, accessibility, communications, ignition operations, identified hazards, and medical response capabilities. When the operations function has expanded significantly, safety staffing would likely increase as well.

OPERATIONS

The operations function is likely to be scaled up to manage span of control or other issues. One or more operations positions ranging from single resource boss to branch director could be used to provide oversight to firing (ground and/or aerial), holding, and/or contingency resources. On less complex burns there may only be a need for minimal operational resources such as a firing boss and holding resources, while on large-scale or high-complexity burns, multiple levels of oversight may be in place to manage aviation assets or ground resources organized into divisions, groups, and branches.

PLANNING

The local unit, GACC Predictive Services, and National Weather Service offices are sources of support for specific tasks like geographic information systems (GIS), mapping, smoke modeling, and fire weather and behavior information. For projects at a larger scope or higher complexity, one or more personnel to manage planning functions, such as resource tracking and developing an incident action plan (IAP), may be added. For longer duration or higher complexity burns, the RxIT may require dedicated support for mapping, modeling, accomplishment reporting, and other tasks and would expand accordingly. A training specialist may also be assigned to coordinate opportunities and ensure that documentation of training experience is complete. The planning function should be scaled in size and skillset to ensure the needs of the project(s) are met.

LOGISTICS

Logistics support includes management of facilities, food, supplies, communications, equipment, and medical and security needs. Logistics staffing would quickly expand with increases in numbers of personnel, travel distances, and locations to be supported. It is difficult to effectively support implementation if the needs are unknown or underestimated. Proactively identifying the need for complex logistical coordination and support before issues emerge would allow the logistics organization to be adequately expanded.

FINANCE

The administrative staff from the local unit is often relied upon for any necessary finance support, which is minimal when only local resources performing regular job duties are assigned.

If the scope and scale of activity escalates to include off-unit, administratively determined (AD), and/or contracted resources, it is likely that a finance section of at least one person would be needed to address cost tracking, time recording, and other functions associated with fire suppression.

Finance processes are expected to parallel those used in wildfire suppression, and currently qualified finance personnel (e.g., time recorders, cost unit leaders) would gain proficiency in managing these functions for prescribed fire. The software used in wildfire suppression (e-ISuite) can be adapted to meet specialized prescribed fire reporting needs. Coordination with budget and administrative staff would be required to ensure that funds monitoring, data collection, and other processes are tailored to meet agency reporting and funds tracking needs.

Prescribed fire projects have historically been funded using allocations to specific units for identified projects. If projects are combined or expanded, appropriate job codes would need to be identified and additional funding may be needed. A process to identify resource needs and request supplemental funding could mirror the process currently used to request severity funding for wildfire suppression. Prescribed fire funding appropriations also have limitations on use that result in complications to both acquisition of services via contracts and agreements and the use of AD employees, cooperators, and interagency personnel. Forest Service equipment and personnel including both fire and militia employees have been relied upon to provide necessary resources for project implementation; however, it is unlikely that the agency can significantly expand the pace and scale of prescribed fire without access to resources from outside the agency.

While authorities exist to hire AD personnel and to establish contracts and agreements for prescribed fire projects, significant restrictions and extended timeframes for implementation have historically made the processes less effective and efficient when compared to the authorities available to acquire suppression resources. Using existing agreements via modifications and/or supplemental project agreements may be an effective alternative to access resources with relevant skills and knowledge of agency policies (e.g., ACES, Job Corps). As efforts continue to establish or expand opportunities to use contracted and nonagency resources for prescribed fire, there may be changes to financial management at the project level, which will require clear and timely communication between all levels of support.

PRESCRIBED FIRE PRIORITIZATION

A prescribed fire prioritization decision support process and associated tools (see appendix B) were developed to facilitate selection of the right site investments, at the right time, and with the right resources to conduct Rx burns on a landscape. Designed to be scalable and flexible for use at the local, zone/subgeographic, geographic, or national level, this process could be used when resource needs are elevated or when potential shortages exist.

The three tools for the decision support process include a timing matrix that identifies potential burn windows and periods of potential resource shortages; a worksheet that assigns a rating for decision makers; and a conference call conversation among decision makers to validate and prioritize implementation. Refer to appendix B for the specific tools and guidelines for use.

Rather than producing a final determination for prioritization, the process informs conversation to support prioritization decisions. It is critical that decision makers remain flexible to nuances not fully captured in any rating mechanism. Ultimately, available resources would be allocated to maximize acres treated in high-priority areas.

The "Rx Fire Implementation Timing Matrix" identifies periods of conflicting resource availability. During times that resource demand is high, the "Rx Fire Implementation Prioritization Worksheet" can be used to assist decision making relative to resource allocation.

The "Rx Fire Implementation Prioritization Worksheet" provides information that assists in ranking treatment areas. Aligned with the wildfire multi-agency coordination (MAC) concept and adjusted for prescribed fire criteria, the worksheet emulates familiar processes and would integrate seamlessly into prescribed fire programs. Numerical ratings are based on multiple criteria, including the prescribed fire objectives (with a focus on those that align with agency policies related to hazard fuel reduction, wildland-urban interface, national firesheds, etc.). It uses the best available science and analytics found on the Risk Management Assistance (RMA) Dashboard and includes a variety of weighted contributing factors, such as the utilization of grant programs; fiscal sources and duration of funding; cross-boundary collaboration and community engagement; collaboration with Tribal, State, Department of the Interior (DOI), and other partners; biological considerations; and social interdependencies.

The information collected and rated using the "Rx Fire Implementation Prioritization Worksheet" could also be displayed geospatially. An ArcGIS Online (AGOL) layer showing landscape-scale prescribed fire unit polygons with associated attribute tables and ratings displayed on a map may assist information sharing and resource allocation decisions. This product could capture accomplishments in near-real-time and could be shared on the RMA Dashboard, providing a timely, easy-to-access service not currently available through the Forest Activity Tracking System (FACTS). It could also be expanded

to include additional landscapes or prescribed fire work outside of these areas.

The "Rx Fire Prioritization Conference Call" helps identify resource needs, duration of needs, and resource availability. Managers of potential prescribed fire units discuss unique challenges and opportunities to validate or adjust initial ratings and prioritize treatment area implementation. Information gathered and displayed during the process is shared among decision makers and implementers for operational support and resource allocation. Other leadership/coordination entities or subject matter experts may participate in the call to add insight. These can include Predictive Services personnel, fire behavior analysts, incident meteorologists, or others.

The "Rx Fire Prioritization Conference Call" follows the concepts currently used by MAC groups at subgeographic, geographic, and national levels to address wildfire support successfully and efficiently. These calls would provide a forum for the multi-mission interaction that would best serve prescribed fire implementation. It is likely that during periods of potential competing resource demands between wildfire response and prescribed fire implementation, the conversations will be critical to understand and manage the full scope of needed resources for both prescribed and wildfire management.

ADDITIONAL FACTORS

MOBILIZATION

The "National Prescribed Fire Program Review" (USDA September 2022) stated an intent to mobilize more resources—such as qualified militia, contractors, and resources used for suppression—to support increased prescribed burning across large landscapes. Challenges exist when mobilizing these resources; however, none are system problems per se. For example, many Forest Service suppression resources already manage a heavy workload in wildfire response, which limits availability for other assignments. Most existing contracts for equipment and crews do not include provisions for prescribed fire work.

Cooperators and partners could be mobilized, but agreements need to be established and/or modified to expedite and simplify their use. More detailed information regarding potential limitations to mobilization and possible solutions to increase available resources for prescribed fire implementation is included in appendix C.

WORKFORCE DEVELOPMENT

Currently the National Interagency Prescribed Fire Training Center and the Forest Service Fuels Academy offer curriculums that combine classroom training and experiential learning to develop prescribed fire expertise. Successful implementation of this mobilization strategy will require an expansion of both programs.

National Interagency Prescribed Fire Training Center (NIPFTC) and Western Prescribed Fire Training Center (PFTC-West)

The NIPFTC programs blend prescribed burning experience with foundational topics for prescribed fire practitioners, fire managers, and agency administrators. Emphasis is placed on field experience, providing maximum opportunities to build prescribed fire skills and knowledge.

The "National Prescribed Fire Program Review" (USDA September 2022) states, "By January 1, 2023, we will establish a Western Prescribed Fire Training curriculum with the interagency fire and research community, and partners, to expand the successes of the NIPFTC. This curriculum would incorporate the knowledge and experience of Tribes, partners, and communities and include a strategy of training and developing skills together so we can build collective capacity to expand the use of prescribed burning on National Forest System and other lands."

The PFTC-West initiative is an opportunity to expand the current NIPFTC program to include prescribed fire training in western terrain and fuel types. Participants will have the benefit of experiential learning in environments where priority projects are planned.

Forest Service Fuels Academy

The Fuels Academy provides a structured 3-year training and development program designed primarily for entry-level fuels specialists, with a target group size of up to 20 participants. The next group is currently scheduled for fiscal year 2024.

WHAT IT WILL TAKE

- Create position descriptions for RxIT positions (burn boss, operations, safety, logistics, public information, planning, and finance) to support the implementation plan.
- Develop a national fire management multi-mission coordination system encompassing prescribed fire, naturally occurring wildfire for resource benefits, and wildfire missions. This group would address interagency coordination of prescribed fire and allocation of operational resources among prescribed fire implementation and competing wildfire priority needs. Issues exist around cache support, logistical assets, mobilization, and mission availability.
- Incorporate the RxCS into the National Wildfire Coordination System (NWCS) including:
  - Use of the prioritization system in appendix B
  - Adding a prescribed fire coordinator to each established MAC group in alignment with existing coordination systems and processes at all levels (local to national)
- Use the Interagency Resource Ordering Capability (IROC) system and associated processes for wildfire and other incident response for a year-round inventory of qualified resources available for prescribed fire assignments.
- Integrate wildfire suppression processes related to budget, grants and agreements, contracting, payment processing, and other financial concerns into prescribed fire implementation.

- Update PMS 484 to incorporate language addressing or including intent for emerging concepts identified during this strategy development. PMS 484 does not currently include any language related to the RxIT (and leadership roles within it), RxCS (the role in multi-mission coordination), or the updated AA qualifications.
- Create virtual prescribed fire planning and development teams to implement projects within Wildfire Crisis Strategy landscapes and other areas in need of prescribed fire. These teams could fill the planning gap between NEPA decisions and prescribed fire implementation with a prescribed fire planner, project manager, and data manager/GIS expert.
- Effectively address identified issues related to resource availability and usage, including:
    - Overtime and hazard pay
    - Contracts and agreements
    - Hiring authorities

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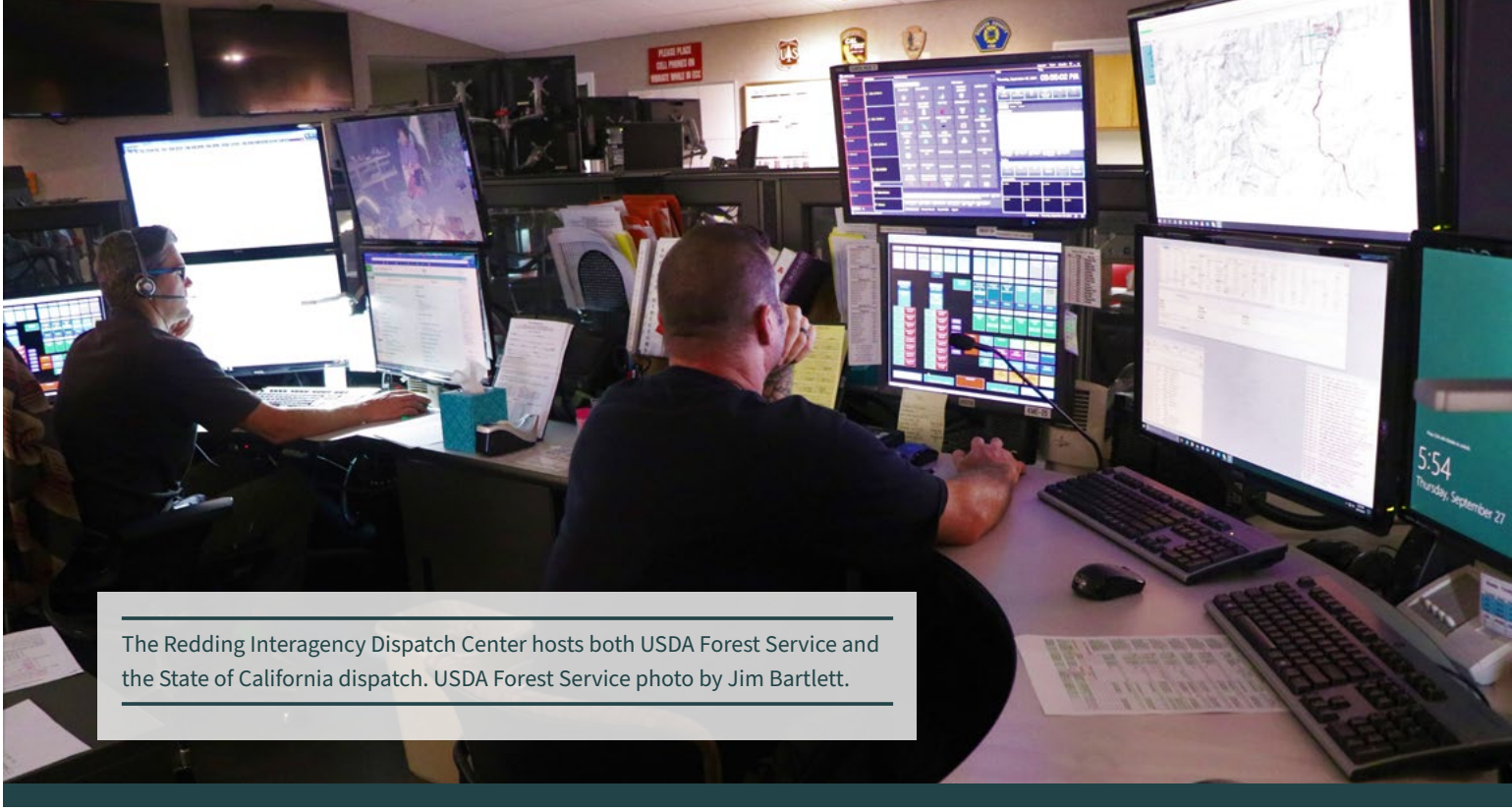
LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	MEANING
AA	agency administrator
ACES	Agriculture Conservation Experienced Services
AD	administratively determined
C&G	command and general staff
DO	duty officer
DOA	delegation of authority
DOI	Department of the Interior
FACTS	Forest Activity Tracking System
FAM	Fire and Aviation Management
G&A	grants and agreements
GACC	Geographic Area Coordination Center
GIS	geographic information system
IC	incident commander
ICS	incident command system
IMT	incident management team
IROC	Interagency Resource Ordering Capability
LSC	logistics section chief
MAC	multi-agency coordination
NEPA	National Environmental Policy Act
NGO	nongovernmental organization
NICC	National Interagency Coordination Center
NIPFTC	National Interagency Prescribed Fire Training Center
NMAC	National Multi-Agency Coordinating group
PFTC	Prescribed Fire Training Center
PFTC-West	Western Prescribed Fire Training Center
PMS 484	Standards for Prescribed Fire Planning and Implementation
RMA	risk management assistance
RXA1/RXA2/RXA3	prescribed fire agency administrator type 1/2/3
RXB1/RXB2/RXB3	prescribed fire burn boss type 1/2/3
RxBB	prescribed fire burn boss
RxCS	prescribed fire coordination system
RxIT	prescribed fire implementation team
RXMG	prescribed fire manager
TES	threatened and endangered species
UTF	unable to fill
WUI	wildland-urban interface



The Redding Interagency Dispatch Center hosts both USDA Forest Service and the State of California dispatch. USDA Forest Service photo by Jim Bartlett.

APPENDIX A: RxIT STAFFING CONSIDERATIONS BY FUNCTION

INCIDENT COMMAND

- Prescribed fire manager (RXMG)
    - If multiple prescribed fire projects are to be implemented, identify opportunities to utilize this position to maintain and build depth in the agency workforce.
- Prescribed fire burn boss, type 1, 2, and 3 (RXB1, RXB2, RXB3)
    - Types correspond to burn complexity levels of high, moderate, and low
    - Assigned burn boss must be qualified at or above burn complexity level
    - Recommend trainee be assigned if available
    - May transition management for monitoring/ patrol/mop-up phase

INFORMATION

The following proposed organization for the public information function is an example of what an RxIT could use to successfully staff for burn implementation days:

- Lead public information officer (PIO) (trainee acceptable)
- Multiple PIOs (any qualification (type 1, 2, 3 or complex (C))) to accomplish community engagement work
- Two-person audio/visual team with editing capability (could be any type of PIO, a contractor, or a technical specialist with those skills, and should be line-capable or paired with a line-capable escort)

Additionally, the following products and capabilities would help public affairs and community engagement efforts when conducting prescribed fires on landscapes identified in the Wildfire Crisis Strategy:

- Clear and consistent messaging incorporating regional and national office talking points
- Basic smoke education products
- News release templates
- Story map templates
- InciWeb support
- PIO(s) with audio/visual technical expertise
- Skilled writer(s) to create press releases and updates
- Sanctioned email distribution software
- Everyday public affairs support as needed

OPERATIONS

- Firing Boss (FIRB)
    - Multiple FIRBs may be assigned depending on size and complexity (e.g., aerial and ground divisions).
    - The FIRB manages assigned resources including engines, crews, and others to coordinate and execute planned ignition across a unit and hold fire within established control lines.
- Aviation
    - Airspace coordinator: Position may be shared at forest, zone, or regional levels, as aviation resources are likely to be shared across landscapes.
    - Helibase/helicopter manager: Either or both may be required depending on level of helicopter staffing.
    - Unmanned aircraft systems (UAS) module(s) may be used for limited aerial firing and/or for reconnaissance. Use must be closely coordinated with other aviation assets.
    - Helitorch modules may be used for aerial firing.
    - Plastic sphere dispenser operator (PLDO) may be needed for aerial firing.
    - Local or alternative base of operations may need to be established for effective support of firing operation.
    - Dip sites may need to be identified as part of a contingency plan.
- Holding
    - Single resource boss(es) and/or task force leader(s)
- Contingency
    - Must meet the minimum defined in burn plan
    - May be supplemented by resources identified for initial attack
    - Reporting location identified and known to all

PLANS

The following positions/skills can be staffed and scaled as needed:

- Planning section chief type 1, 2, 3, or complex (C) (PSC1, PSC2, PSC3, or PSCC)
- Resource unit leader (RESL)
- Situation unit leader (SITL)
    - Fire behavior analyst (FBAN)
    - Long-term fire analyst (LTAN)
    - Incident meteorologist (IMET)
    - GIS specialist (GISS)
- Training specialist (TNSP)
- Incident technology support specialist (ITSS), if not provided by logistics section

LOGISTICS

There are specific logistics staffing and qualification requirements that must be met to use some resources. Examples include:

- A communications unit leader (COML) or communications technician (COMT) is required to receive and manage communications equipment (repeaters, radios, etc.) ordered from the National Interagency Fire Center (NIFC).
- Mobile shower unit (MSU) and mobile food service unit (MFSU) national contracts will be available for prescribed fire project implementation in 2023. For an MFSU, a food unit leader (FDUL) or logistics section chief (LSC) is required to sign invoices, approve food menus, and ensure contract provisions are met. A facilities unit leader (FACL) or LSC is required to sign invoices for an MSU.

Other potential positions include:

- LSC3/FACL: Consider sanitation needs that must be managed and whether more than one person is needed.
- Receiving and distribution manager (RCDM): Consider if significant cache support required.
- Ordering manager (ORDM): The ORDM needs to be proficient in IROC.
- COML/COMT: Consider if a separate communications network is required.
- Equipment manager (EQPM): Consider if weed wash and/or vehicle inspections will be required.

Additional logistical considerations:

- Water and meal support
- Fuel tender
- Medical resources including ambulance and/or medical personnel for the fireline such as emergency medical technician (EMTF) or paramedic (EMPF)
- Land use agreements (to include helispots)
- Network/internet and technology support including an incident technology support specialist (ITSS)

FINANCE

Additional considerations and potential positions to be filled:

- Incident business advisor/specialist
    - Knowledge of Forest Service prescribed burn policies and funding needed
- Finance section chief type 1, 2, 3, or complex (C) (FSC1, FSC2, FSC3, or FSCC)
    - Consider staffing one or more of the unit leader positions (e.g., cost unit leader (COST), time unit leader (TIME), procurement unit leader (PROC), compensation/claims unit leader (COMP)) if needed to match to the scale of project.
    - Consider using personnel time recorders (PTRCs) and/or equipment time recorders (EQTRs) depending on number and type of resources.
    - Consider options for virtual support—the COMP is a good example of a potentially virtual position.
- A micropurchaser and access to contracting officer/purchasing agent for procurement needs may be needed. These positions can be virtual.

APPENDIX B: PRESCRIBED FIRE PRIORITIZATION DECISION SUPPORT

PROCESS

The prescribed fire prioritization decision support process includes three components: (1) a timing matrix to identify potential burn windows and periods of potential resource shortages; (2) a prioritization worksheet that assigns a point rating for decision makers; and (3) a conference call to validate, compare, and prioritize implementation projects. These projects are also called treatment areas and the terms are used interchangeably in this appendix.

The tools in this appendix are also available in a printable, fillable Excel document on the Forest Service website. <https://www.fs.usda.gov/sites/default/files/Rx-Fire-Implementation-Tools.xlsx>

RX FIRE IMPLEMENTATION TIMING MATRIX

The "Rx Fire Implementation Timing Matrix" shown below is an example of a tool used to identify potential periods of heightened resource competition across multiple landscapes. Potential burn implementation windows are identified using three categories (favorable, limited opportunity, and nonfavorable) based on burn objectives and historical weather/seasonality for the land bases. The matrix shows collective burn window alignment and highlights potential times of high resource demand for prescribed fire implementation. During times of high resource demand, the "Rx Fire Implementation Prioritization Worksheet" can be used to assist prioritization decisions.

Prescribed Fire Implementation Timing Matrix

Landscape or Area	NFs	January	February	March	April	May	June	July	August	September	October	November	December
Landscape 1	ABC												
Landscape 2	DEF												
Landscape 3	GHI												

Nonfavorable for Rx fire implementation

Limited opportunity for Rx fire implementation

Favorable for Rx fire implementation

RX FIRE IMPLEMENTATION PRIORITIZATION WORKSHEET

The "Rx Fire Implementation Worksheet" can be completed at the unit level, before the fire season or before implementing prescribed fire, for each planned project and can be updated as needed. It is used by decision makers to prioritize project implementation in landscapes that have conflicting resource needs and provides information to assist in ranking treatment areas based on agreed upon criteria. Rather than producing a final determination for prioritization, the numeric ratings inform conversation between decision makers as they move ahead to support implementation. It is critical they remain flexible to nuances not fully captured in any rating mechanism. Ultimately, the worksheet is one of several tools used in the process of allocating available resources to maximize acres treated in high-priority treatment areas.

RX FIRE PRIORITIZATION CONFERENCE CALL

Conduct conference calls for prescribed fire prioritization as needed during periods of increased or competing resource needs with representatives from units with projects in competing burn windows. The call helps to identify resource needs, duration, and availability and provides a forum to discuss unique challenges and opportunities. Information shared and collected during this call is used to validate and prioritize Rx fire implementation in treatment areas.

Ideally, each unit would complete and submit a "Rx Fire Implementation Prioritization Worksheet" for each project prior to the call; however, information could also be collected during the call. Each unit should also be prepared to report and discuss the following:

- Prior period (e.g., week, month) accomplishments
- Upcoming Rx fire implementation
- Resources available at the local level for implementation
- Resource orders placed
- Critical needs projected

Information is collated for use by decision makers to assign implementation priorities and operational support. The prioritization worksheets are used to complete the "Treatment Area Priority Summary Rating Matrix," and information collected during the call regarding resource needs and availability is used to complete the "Treatment Area Resource Prioritization" worksheets. When assigning an overall ranking between projects, the points from the worksheet are considered, but do not dictate that the highest score will be the highest priority. All information collected is considered by decision makers in the prioritization process.

RX FIRE IMPLEMENTATION PRIORITIZATION WORKSHEET

Directions: In each section, mark all boxes that apply to the project. Transfer point values to the "Treatment Area Priority Summary Rating Matrix" for comparison between projects.

OBJECTIVES/INTENT — MAXIMUM 23 POINTS (PTS)

Agency expectations for priority implementation include (1) aligning public investments in fuel treatments that capitalize on risk reduction activities, (2) exhibiting demonstrable risk reduction activities for communities and landowners in the wildland-urban interface, and (3) promoting landscape-scale activities that address creation and maintenance of resilient landscapes.

A. TREATMENT AREA INTENT — POINTS:

- ☐ Wildland-urban interface (3 pts)
- ☐ Hazard fuel reduction (2 pts)
- ☐ National fireshed (3 pts)
- ☐ Ecological/Restoration (1 pt)
- ☐ Maintenance prescribed fire (1 pt)
- ☐ Scale (1,000 acres or more) (2 pts)

B. CRITICAL VALUES AT RISK THAT DRIVE TREATMENT — POINTS:

- ☐ Quantitative wildfire risk assessments (high to very high)* (1 pt)
- ☐ Critical infrastructure (high to very high)* (1 pt)
- ☐ Watershed (high to very high)* (1 pt)
- ☐ Remote infrastructure (high to very high)* (1 pt)
- ☐ Wildland-urban intermix (1 pt)
- ☐ Housing density (purple)* (1 pt)
- ☐ Highway corridor (1 pt)
- ☐ Tribal/Cultural/Heritage (site protection/flora/fauna) (1 pt)
- ☐ Public water source (high to very high)* (1 pt)
- ☐ Tribal incorporation of traditional ecological knowledge (2 pts)

** Refer to the Risk Management Assistance (RMA) Dashboard, used for fire and fuels planning: https://experience.arcgis.com/experience/f9d7f7f920494c3db43a23a8dffe4664*

C. ADDITIONAL FACTORS FOR CONSIDERATION — MAXIMUM 25 POINTS (PTS)

Contributing factors that tier to national prioritization include (1) better utilization of grant programs; (2) cross-boundary collaboration and community engagement; and (3) collaboration with Tribes (Tribal Forest Protection Act), State entities (Good Neighbor Authority), and other partnerships.

C.1 JURISDICTIONAL INVESTMENT (OWNERSHIP OF TREATMENT AREA(S) IN PROJECT) — POINTS:

- ☐ DOI agency partnership (1 pt)
- ☐ Multiple agency implementation resources utilized (1 pt)
- ☐ Tribal partnership (1 pt)
- ☐ State agency partnership (1 pt)
- ☐ Local government agency partnership (1 pt)
- ☐ Ready to implement 2–3 Rx burns (1 pt) OR 4+ Rx burns (3 pts)

C.2 FUNDING SOURCES (MAINTAIN OR IMPROVE FUELS INVESTMENTS FROM PREVIOUS 5 YEARS) — POINTS:

- ☐ Partnership funds (e.g., Joint Chiefs, NGO) (1 pt)
- ☐ Contracts (limitations) (1 pt)
- ☐ Agreements (limitations) (1 pt)
- ☐ Funding duration/expiration (<2 years) (2 pts) OR 3–5 years (1 pt)
- ☐ Grants (limitations) (1 pt)

C.3 TIMING RESTRICTIONS — POINTS:

- ☐ Biological deadlines (e.g., TES concerns) (1 pt)
- ☐ Pathogens/Disease (root rot, insects) (1 pt)
- ☐ Sociopolitical restrictions (1 pt)
- ☐ Seasonal/Event restrictions (local events which could be impacted) (1 pt)

C.4 SMOKE LIMITATIONS — POINTS:

- ☐ Class 1 airshed (timing) (1 pt)
- ☐ Nonattainment areas (1 pt)
- ☐ Critical infrastructure (railroad/highway/utility lines) (1 pt)

C.5 COMMUNITY RECEPTIVITY — POINTS:

- ☐ Functioning prescribed fire fuels collaborative/ coalition (3 pts)
- ☐ Public information management (public meetings, social media/press) (1 pt)

D. TREATMENT AREA TOTAL — POINTS:

DOI = Department of the Interior; NGO = nongovernmental organization; TES = threatened and endangered species

TREATMENT AREA PRIORITY SUMMARY RATING MATRIX DATE

Directions: Transfer point values from the "Rx Fire Prioritization Worksheet" for each project/treatment area. Overall ranking may be affected by factors other than worksheet points.

TREATMENT AREA OVERALL RANKING	1	2	3	4	5	6
TREATMENT AREA NAME						
A. Treatment area intent						
Wildland-urban interface						
Hazard fuel reduction						
National fireshed						
Ecological/Restoration						
Maintenance prescribed fire						
Scale (1,000 acres or more)						
B. Critical values at risk that drive treatment						
Quantitative Wildfire Risk Assessments						
Critical infrastructure						
Watershed						
Remote infrastructure						
Wildland-urban intermix						
Housing density						
Highway corridor						
Tribal/Cultural/Heritage (site protection/flora/fauna)						
Public water source						
Tribal incorporation of traditional ecological knowledge						
C. Additional Factors for Consideration						
C.1. Jurisdictional Investment						
DOI agency partnership						
Multiple agency implementation resources utilized						
Multiple (2–3) Rx fires ready to implement						
State agency partnership						
Local government agency partnership						
Tribal partnership						
Multiple (4+) Rx fires ready to implement						
C.2. Funding Sources						
Partnership funds (e.g., Joint Chiefs, NGO)						
Contracts (limitations)						
Funding duration/expiration (<2 years)						
Grants (limitations)						
Agreements (limitations)						
Funding duration/expiration (3–5 years)						
C.3. Timing Restrictions						
Biological deadlines (e.g., TES concerns)						
Pathogens/Disease (root rot, insects)						
Sociopolitical restrictions						
Seasonal/Event restrictions						
C.4. Smoke Limitations						
Class 1 airshed						
Nonattainment areas						
Critical infrastructure (railroad/highway/utility lines)						
C.5. Community Receptivity						
Functioning prescribed fire fuels collaborative/coalition						
Public information management (public meetings, social media/press)						
D. TOTAL TREATMENT AREA POINTS						

TREATMENT AREA RESOURCE PRIORITIZATION DATE:

TREATMENT AREA OVERALL RANKING	1		2		3		4	
TREATMENT AREA NAME								
Resources	**Number Required***	**Projected need****	**Number Required**	**Projected need**	**Number Required**	**Projected need**	**Number Required**	**Projected need**
Agency administrator								
Prescribed fire manager								
Burn boss								
Firing boss								
Aircraft, rotor, or UAS								
Bulldozers								
Engine type 3								
Engine type 4								
Engine type 6								
Crews (type 1)								
Crews (type 2)								
Wildland fire module								
FBAN or IMET								
Public information/affairs support								
Other resources kinds & types								
Overhead								
Prescribed fire implementation team (RxIT)								
Logistical support (caterer/showers)								
Cache items								

APPENDIX C: MOBILIZATION

INTRODUCTION

A team including fire management officers, hotshot crew superintendents, regional fire operations specialists, dispatchers and dispatch coordinators, contracting officers, contracting officer representatives, Interagency Resource Ordering Capability (IROC) subject matter experts, and Washington Office Fire and Aviation Management (FAM) personnel was formed to explore mobilization challenges and to identify potential solutions to those. The team reached out to additional groups and individuals to capture a broad range of perspectives and experience levels in addressing specific issues, including both entry-level firefighters and line officers. The primary challenge identified was not the mobilization system itself, but the lack of available resources. This is attributed to both a reduced availability of Forest Service resources and the inability to use partner, cooperator, and nationally contracted resources for prescribed burning.

RESOURCE AVAILABILITY

The current model relies heavily on a time-consuming process of direct communication and coordination between fire management officers (FMOs), agency administrators (AAs), and others to identify available resources prior to placing resource orders as "named requests" in IROC. Few orders are currently placed as open orders (no name attached) in the dispatch system. Reports from IROC show that nearly half of the orders placed were named requests. Data was requested for review from the National Interagency Coordination Center (NICC) regarding both filled orders and those that were unable to fill (UTF) for prescribed (Rx) fire projects.

From March 2020 to November 1, 2022, there were 10,922 Rx fire project-specific orders placed in IROC. Of those, 5,173 were named requests for a specific person, and 4,553 were for Forest Service Rx fire projects specific to its Southern Region. When the IROC system is used, the UTF rate is approximately 9 percent. Of note, local resources being used are often not on an order placed in IROC and therefore are not considered in this analysis. The results suggest that the IROC and dispatching system are working for Rx fire projects when they are used.

Additional reports were requested to review the single-day availability of fire engines, types 3–7; hotshot crews; and type 1 and type 2 firefighters. These resource types were chosen because they had the highest UTF rates on the previous reports.

The following illustrates the issue of resource availability: On November 10, 2022, there were 84 Forest Service engines available in IROC. Most of these were in California (Pacific Southwest Region), due to the suppression season having extended longer into the fall. This included all availability types (local, geographic area, and national). The Forest Service has nearly 1,100 engines in its system. From the crew reports, 11 hotshot crews were available from the 91 in the Forest Service. The analysis did not try to assess the number of firefighters (FFT1 and FFT2) available in IROC, as individual firefighters are usually assigned to a resource type. For example, many members of a hotshot crew (FFT1 and FFT2)

would show as firefighters, but they are not available as individuals while rostered with the crew. The team estimated that 343 individual firefighters, either type 1 or type 2, were available across the country, of the thousands, if not tens of thousands, that could be available.

Forest Service fire program employees are generally considered as part of a rostered resource such as a hotshot or helitack crew or an engine, not as individual firefighters. Consequently, once those resources have completed their seasons, it is rare that the individual firefighters from that resource are made available in IROC, which is demonstrated by only 343 being available on November 10, 2022. Some of the employees on crews and engines are temporary and leave the agency after the established "season," leaving the crew or engine unable to meet mobilization standards. For example, a type 1 hotshot crew must have at least 18 people on the roster to mobilize. If 1 of 18 is missing, 17 are left unavailable in IROC. Some employees may not want to be available, or their supervisors may not want them available. The solution is a culture shift to allow individual employees to be available and informing the field to order individual resources. This solution may be difficult to implement in an interagency environment.

DISPATCH

Dispatch offices are currently understaffed and already carry a heavy workload due to fire suppression, which makes significantly increasing their workload unrealistic. The NICC estimates that nationwide a 30-percent vacancy rate exists in dispatch center staffing, which equates to over 350 vacancies. One challenge to filling these vacancies is a lack of incentivization to apply due to ineligibility for firefighter supplemental pay for dispatch employees (2151 series). Dispatch coordinators expect that the vacancy rate will continue to rise under current conditions.

COMPETING PRIORITIES

Supervisors of Forest Service fire suppression resources generally do not make these resources available during periods of low wildfire occurrence that are generally considered their off-season. When employees and supervisors at multiple levels, including forest supervisors, were queried as to the likelihood of making resources available, the responses were generally negative. Reasons included both having local fuels and project work to complete as well as a desire to take care of employees by not further impacting work/life balance.

HOTSHOT CREW REVIEW

During the national interagency hotshot crew review, several questions were asked through the survey and in focus groups regarding performing fuels work away from the local unit during the off-season. One of the main themes that emerged from the survey and focus group conversations is the perception that crews see themselves caught in mounting competition between fire suppression and fuels program expectations, especially as Federal agencies seek to increase capacity for implementation of fuels reduction and prescribed burning projects (e.g., the Forest Service's "Confronting the Wildfire Crisis" efforts). While the scope of the hotshot crew review does not include strategies to build additional capacity, it can be used to understand how that effort may overlap with the hotshot program.

In a 6-month season, an average hotshot may work as many hours as other agency employees work in

12 months. Hotshots expressed concern that they may not be a viable solution to increase capacity for prescribed burning because of end-of-season fatigue. They rely on their off-season, which overlaps with the prescribed burning season in many areas, to manage both physical and mental fatigue. Extending the season to require additional travel, long hours, and exposure to fire may be detrimental to their physical well-being, mental health, or both. Most survey respondents (over 700 from all levels of the agency) did not believe that hotshots should play a large role in fuels management at this time, with only 28 percent of survey respondents stating that hotshots were the best resource for completing fuels management projects, including prescribed burning, and just over 50 percent indicating that local fuels crews were the best resource. Although the hotshot crew review focused specifically on hotshot crews, many other fire suppression resources have a comparable workload depending on the season and location. These resources face similar fatigue issues, which is likely to be reflected in resource availability.

The competition between fuels management and fire suppression faced by land management agencies was clearly articulated by one focus group member:

"I think the natural tendency will be to bolster the capacity for fire suppression only at the expense of other needs. Fuels mitigation is our best long-term strategy for the suppression challenges we face and our path for dealing with the issue strategically. If we drift more to suppression only, then we will continue to become more and more reactionary."

The hotshot program has nearly 1,500 permanent positions when all are filled, so not having these crews available for fuels work can have a significant impact on the ability to increase the pace and scale of prescribed burning. If the hotshot program can adapt effectively to changing conditions and organization improvement efforts, agency fuels programs and the hotshot program will both benefit. Career ladders could be enhanced for fuels crews, hotshot crews, and supervisors. The competition for resources between suppression and prescribed burning will continue to be a challenge; however, flexibility and proactive communication among employees, supervisors, and program managers will improve resource availability for these programs.

OTHER BARRIERS

Pay: A significant challenge to employee participation in prescribed fire projects is the pay disparity between wildfire suppression and prescribed burning. For prescribed burning, employees do not receive hazard pay and exempt employees do not receive full overtime. Without those incentives, employees are less likely to take assignments, especially those that are away from their home units and families.

Hiring: Hiring is very challenging and time consuming and is also typically completed during the same timeframe as prescribed burning. A more streamlined hiring process could make more employees available.

Culture: Local line officers and fire managers feel immense pressure to get their local priority work done, and view employees on their organization charts as "theirs" to accomplish this work. Even when asked about hotshots, which are listed as

national resources, similar responses were provided. In the off-season, they are employees of the local unit. If local supervisors do not make employees available to support national priorities, any solutions to incentivize employees to be available will be moot. The team suggests a message from the Chief or other senior executives that addresses the need to make resources available to Wildfire Crisis Strategy landscapes over local fuels and other projects.

The ingrained culture of the Forest Service surrounding local priorities and use of employees to accomplish those will be difficult to change. When forest supervisors and others were asked what it would take, the response was a reduction in assigned work at the local level and the need for a change in the system that would ensure reciprocity. Supervisors need to be able to trust that if employees are made available for landscape-scale prescribed fires outside of their local area, they will in turn have resources made available to them to accomplish local priority projects. This is not a feature of the wildfire suppression model and may be difficult to build into prescribed fire implementation.

OPPORTUNITIES

Partners and cooperators are an additional source of resources; however, current availability is limited by the lack of agreements under which these could be mobilized. The Forest Service is committed to coordinating with State and local agencies, communities, collaborative groups, nongovernmental organizations, private landowners, Tribes, partners, and others to build the necessary workforce capacity and coalition support for complementary, cross-boundary treatments across landownerships. The agency's Washington Office has recently worked to expand the national agreement with The Nature Conservancy (TNC), which will allow broader participation by this group in Forest Service projects. Other partnerships that can be grown or expanded, especially those with Tribes, should be pursued to increase resource availability.

Many local and State cooperators may be available to work with the Forest Service, both on agency lands and across boundaries; however, limited capacity to put necessary agreements in place at the local level has been identified as a challenge. Implementing broad national agreements could reduce or eliminate this challenge.

CONTRACTING

Additional access to nationally contracted resources is necessary to significantly increase the pace and scale of prescribed burning. Prior to 2023, 40 type 2 initial attack crew, indefinite delivery, indefinite quantity (IDIQ) contracts could be used to accomplish prescribed burning; however, the 529 crews under the national type 2 crew blanket purchase agreements (BPAs) could not be used. In addition, thousands of engines, bulldozers, water tenders, feller bunchers, and other equipment under virtual incident procurement (VIPR) incident blanket purchase agreements (IBPAs) were not available for this work. National caterers and showers under contracts for fire were also unavailable for prescribed fire projects.

Through collaboration between procurement and property services (PPS) and FAM, potential solutions to access these resources were identified. These solutions may be temporary while different contracting instruments are being written. It is important to note that these solutions apply only to using the resources for prescribed burning

projects (table C-1). Resources can be used for burn preparation, ignition, holding, and contingency, but they cannot be used for mechanical fuels projects such as thinning.

Table C-1 outlines various incident procurement operations (IPO) contracts and agreements that have been made available to FAM in support of landscape investments and provides information regarding how processes will work in the field.

Table C-1.—Incident procurement process

Resources	Ordering procedures	Administration on site	Notes
Type 2IA (initial attack) crews	Requisition package must be submitted through the appropriate contract service area (CSA). Request for quote (RFQ) must be issued by a contracting officer.	A contracting officer's representative (COR) will complete necessary documentation as required by the contract. Payments will be completed through the Invoice Processing Platform (IPP).	These resources can be ordered through IROC using the process described for the type 2 crews below if there is a need for their skills, no agency crews are available, and date and time needed makes the requisition package route not feasible. *An IAS requisition and related submittals **is** required for each RFQ.*
Type 2 crews	Orders will be placed through IROC and filled by the NICC.	Government representatives will review and sign daily crew time reports (CTRs) developed by the contract crew. Times shall be posted to the daily use invoice (OF-286). At demobilization, the OF-286 and supporting documentation must be reviewed and signed by both the Government and contractor.	Final invoice packages must be audited and submitted to: sm.fs.asc_eera@usda.gov. *An IAS requisition is not needed for each individual order.*
Mobile showers	Orders will be placed through IROC and filled by the NICC.	Government representative (FACL or LSC) will review and sign daily use invoices. The vendor is required to submit invoice packages to: sm.fs.asc_eera@usda.gov.	*An IAS requisition is **not** needed for each individual order.*
Mobile food units	Orders will be placed through IROC and filled by the NICC.	Government representative (FDUL or LSC) will review and sign daily use invoices. The vendor is required to submit invoice packages to: sm.fs.asc_eera@usda.gov.	*An IAS requisition is not needed for each individual order.*
VIPR IBPAs	Orders will be placed through IROC and filled by the host dispatch center.	Government representatives will review and sign daily shift tickets (OF-297s) developed by the contractor. Daily rates will be posted to the daily use invoice (OF-286). At demobilization, the OF-286 and supporting documentation must be reviewed and signed by both the Government and contractor.	Final invoice packages must be audited and submitted to: sm.fs.asc_eera@usda.gov. *An IAS requisition is **not** needed for each individual order.*

FACL = facilities unit leader; FDUL = food unit leader; IAS = Integrated Acquisition System; IBPA = incident blanket purchase agreement; IROC = Interagency Resource Ordering Capability; LSC = logistics section chief; NICC = National Interagency Coordination Center VIPR = virtual incident procurement.

Cover photo: A prescribed burn on the Stanislaus-Tuolumne Experimental Forest in California. Experimental forests provide valuable research into how prescribed fire can restore healthy landscapes, especially when paired with timber harvests and other mechanical treatments. USDA Forest Service photo by Eric Knapp.

Back cover photo:Wildland firefighters responding to the Slink Fire in the Humboldt-Toiyabe National Forest in California. By applying the well-established processes of wildland fire suppression, the Forest Service can greatly increase the pace and scale of implementing prescribed fires. USDA Forest Service photo by Charity Parks.